WHAT IS CLAIMED IS:

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- 1. A method for treating and/or ameliorating the symptoms of a cerebral ischemic condition in a mammalian subject, comprising administering to the subject an effective amount of a non-alpha tocopherol enriched tocopherol composition, and by said administering, reducing neuronal damage related to said cerebral ischemic condition.
- 2. The method of claim 1 wherein the non-alpha tocopherol enriched tocopherol composition is a gamma-tocopherol enriched tocopherol composition.
- 3. The method of claim 1 wherein the non-alpha tocopherol enriched tocopherol composition is a gamma-tocopherol metabolite enriched composition.
 - 4. The method of Claim 3, wherein said gamma-tocopherol metabolite is 6-hydroxy-2,7,8-trimethylchroman-2-propanoic acid (LLU-α).
 - 5. The method of claim 1, wherein the cerebral ischemic condition is secondary to an occlusion of the cerebral vasculature.
 - 6. The method of claim 5, wherein the occlusion is due to a thromboembolis.
 - 7. The method of claim 2, wherein said gamma-tocopherol enriched tocopherol composition comprises at least 60% gamma-tocopherol.
 - 8. The method of claim 2, wherein said gamma-tocopherol enriched tocopherol composition comprises at least 65% gamma-tocopherol.
 - 9. The method of claim 2, wherein said gamma-tocopherol enriched tocopherol composition comprises at least 70% gamma-tocopherol.
 - 10. The method of claim 2, wherein said gamma-tocopherol enriched tocopherol composition comprises at least 75% gamma-tocopherol.
 - 11. The method of Claim 2, wherein said gamma-tocopherol enriched tocopherol composition comprises at least 50% to 100% gamma-tocopherol.
- 12. The method of Claim 2, wherein said gamma-tocopherol enriched tocopherol composition comprises at least 55% to 95% gamma-tocopherol.

- 13. The method of Claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 95% gamma-tocopherol.
- 14. The method of Claim 3, wherein said gamma-tocopherol metabolite enriched composition comprises 5% to 95% gamma tocopherol metabolite.
- 15. The method of Claim 1, wherein said composition is a nutritional composition.

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- 16. The method of Claim 1, wherein said composition is a pharmaceutical composition.
 - 17. The method of Claim 1, wherein said composition is administered orally.
- 18. The method of Claim 1, wherein said composition is administered parenterally.
 - 19. The method of Claim 1, wherein said composition comprises gammatocopherol at 20mg/kg body weight of said mammalian subject.